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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/031,243	05/28/2002	Maria Athelogou	3400P012	6329

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EXAMINER	
TRAN, MAI T	

ART UNIT	PAPER NUMBER
2129	

DATE MAILED: 05/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/031,243	ATHELOGOU ET AL.	
	Examiner	Art Unit	
	Mai T. Tran	2129	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05/28/2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☒ Claim(s) *7-19* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This Office Action is responsive to application 10/031243, filed May 28, 2002. Claims **1-6** have been examined.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

SPECIFICATION

The disclosure is objected to because of the following informalities: the numbering of the pages in the specification should be typewritten.

Appropriate correction is required.

CLAIM OBJECTIONS

Claims **1-6** are objected to because of the following informalities:

- the numbers in parentheses should be removed from the claims. Appropriate correction is required.
- the expression "and/or" needs to be specified which one by applicants.

Claims **7-19** are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims **7-19** have not been further treated on the merits.

CLAIM REJECTIONS - 35 U.S.C. §101

1. 35 U.S.C. §101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

the invention as disclosed in claims **1-6** is directed to non-statutory subject matter.

2. Claims 1-6 are not claimed to be practiced on a computer, therefore, it is clear that the claims are not limited to practice in the technological arts. On that basis alone, they are clearly nonstatutory.

3. Regardless of whether any of the claims are in the technological arts, none of them is limited to practical applications in the technological arts. Examiner finds that *In re Warmerdam*, 33 F.3d 1354, 31 USPQ2d 1754 (Fed. Cir. 1994) controls the 35 U.S.C. §101 issues on that point for reasons made clear by the Federal Circuit in *AT&T Corp. v. Excel Communications, Inc.*, 50 USPQ2d 1447 (Fed. Cir. 1999). Specifically, the Federal Circuit held that the act of:

> ...[T]aking several abstract ideas and manipulating them together adds nothing to the basic equation. *AT&T v. Excel* at 1453 quoting *In re Warmerdam*, 33 F.3d 1354, 1360 (Fed. Cir. 1994).

Examiner finds that Applicants' "semantic network contains semantic units ... at least some are specific semantic Janus units" references are just manipulating abstract ideas. The claims set forth an invention that may be practiced by paper and pencil.

4. Examiner bases his position upon guidance provided by the Federal Circuit in *In re Warmerdam*, as interpreted by *AT&T v. Excel*. This set of precedents is within the same line of cases as the *Alappat-State Street Bank* decisions and is in complete agreement with those decisions. *Warmerdam* is consistent with *State Street*'s holding that:

> Today we hold that *the transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price,* constitutes a practical application of a mathematical algorithm, formula, or calculation because it produces 'a useful, concrete and tangible result" -- *a final share price momentarily fixed for recording purposes and even accepted and relied upon by regulatory authorities and in subsequent trades.* (emphasis added) *State Street Bank* at 1601.

5. True enough, that case later eliminated the "business method exception" in order to show that business methods were not per se nonstatutory, but the court clearly *did not* go so far as to make business methods *per se statutory*. A plain reading of the excerpt above shows that the Court was *very specific* in its definition of the new *practical application*. It would have been much easier for the court to say that "business methods were per se statutory" than it was to define the practical application in the case as "...the transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price..."

6. The court was being very specific.

7. Additionally, the court was also careful to specify that the "useful, concrete and tangible result" it found was "a final share price momentarily fixed for recording purposes and even accepted and relied upon by regulatory authorities and in subsequent

trades." (i.e. the trading activity is the further practical use of the real world monetary data beyond the transformation in the computer – i.e., "post-processing activity").

8. Applicants cite no such specific results to define a useful, concrete and tangible result. Neither does Applicants specify the associated practical application with the kind of specificity the Federal Circuit used.

9. Furthermore, in the case *In re Warmerdam*, the Federal Circuit held that:

> ...[T]he dispositive issue for assessing compliance with Section 101 in this case is whether the claim is for a process that goes beyond simply manipulating 'abstract ideas' or 'natural phenomena' ... As the Supreme Court has made clear, '[a]n idea of itself is not patentable, ... *taking several abstract ideas and manipulating them together adds nothing to the basic equation*. In re Warmerdam 31 USPQ2d at 1759 (emphasis added).

10. Since the Federal Circuit held in *Warmerdam* that this is the "dispositive issue" when it judged the usefulness, concreteness, and tangibility of the claim limitations in that case, Examiner in the present case views this holding as the dispositive issue for determining whether a claim is "useful, concrete, and tangible" in similar cases.

11. Since the claims are not limited to exclude such abstractions, the broadest reasonable interpretation of the claim limitations includes such abstractions. Therefore, the claims are impermissibly abstract under 35 U.S.C. §101 doctrine.

12. Since *Warmerdam* is within the *Alappat-State Street Bank* line of cases, it takes the same view of "useful, concrete, and tangible" the Federal Circuit applied in *State Street Bank*. Therefore, under *State Street Bank*, this could not be a "useful, concrete and tangible result". There is only manipulation of abstract ideas.

13. The Federal Circuit validated the use of *Warmerdam* in its more recent *AT&T Corp. v. Excel Communications, Inc.* decision. The Court reminded us that:

> Finally, **the decision in In re Warmerdam**, 33 F.3d 1354, 31 USPQ2d 1754 (Fed. Cir. 1994) **is not to the contrary**. *** The court found that the claimed process did nothing more than manipulate basic mathematical constructs and concluded that '**taking several abstract ideas and manipulating them together adds nothing to the basic equation**'; hence, the court held that the claims were properly rejected under §101 ... Whether one agrees with the court's conclusion on the facts, the **holding** of the case is a straightforward application of the basic principle that mere laws of nature, natural phenomena, and abstract ideas are not within the categories of inventions or discoveries that may be patented under §101. (emphasis added) AT&T Corp. v. Excel Communications, Inc., 50 USPQ2d 1447, 1453 (Fed. Cir. 1999).

14. Remember that in *In re Warmerdam*, the Court said that this was the dispositive issue to be considered. In the *AT&T* decision cited above, the Court reaffirms that this is the issue for assessing the "useful, concrete, and tangible" nature of a set of claims under 101 doctrine. Accordingly, Examiner views the *Warmerdam* holding as the dispositive issue in this analogous case.

15. The fact that the invention is merely the manipulation of *abstract ideas* is clear. The data referred to by Applicants' phrase "semantic network contains semantic units ... at least some are specific semantic Janus units" is simply an abstract construct that does not limit the claims to the transformation of real world data (such as monetary data or

heart rhythm data) by some disclosed process. Consequently, the necessary conclusion under *AT&T, State Street* and *Warmerdam,* is straightforward and clear. The claims take several abstract ideas (i.e., "semantic network, semantic units, specific semantic Janus units") and manipulate them together adding nothing to the basic equation. Claims 1-6 are, thereby, rejected under 35 U.S.C. §101.

CLAIM REJECTIONS - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. §112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims **1-6** are rejected under 35 U.S.C. §112, first paragraph because current case law (and accordingly, the MPEP) require such a rejection if a §101 rejection is given because when Applicant has not in fact disclosed the practical application for the invention, as a matter of law there is no way Applicant could have disclosed *how* to practice the *undisclosed* practical application. This is how the MPEP puts it:

> ("The how to use prong of section 112 **incorporates as a matter of law** the requirement of 35 U.S.C. §101 that the specification disclose as a matter of fact a practical utility for the invention.... If the application fails as a matter of fact to satisfy 35 U.S.C. §101, then the application **also fails as a matter of law** to enable one of ordinary skill in the art to use the invention under 35 U.S.C. §112."); In re Kirk, 376 F.2d 936, 942, 153 USPQ 48, 53 (CCPA 1967) ("Necessarily, compliance with § 112 requires a description of how to use presently useful inventions, **otherwise an applicant would anomalously be required to teach how to use a useless invention.**") See, MPEP 2107.01(IV), quoting In re Kirk (emphasis added).

Therefore, claims 1-6 are rejected on this basis.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regards as the invention:

- Applicants are being ambiguous when using the following language in claim 1"said semantic Janus units are capable of carrying out operations on themselves". More than one meaning could be interpreted.
- Applicants need to clarify what exactly "time-variable states" mean? (i.e. are the states being changed randomly or are they being affected by outside events).

CLAIM REJECTIONS - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims **1-6** are rejected under 35 U.S.C. 102(b) as being anticipated by "Semantic Networks and Associative Databases: Two Approaches to Knowledge Representation and Reasoning" by Eo-Pong Lim et al, hereinafter Lim.

Claim 1

A semantic network comprised of a multiplicity of units, wherein said semantic network contains both semantic units (6) possessing relational contents and also linking units (1a to 4c) describing a relational content which links two respective semantic units (6) such that the mutual relation of the two linked semantic units (6) is determined by the relational content, wherein (Figure 5 page 35):

at least some of said semantic units (6) (rectangular nodes in Figure 5 page 35) are specific semantic Janus units (5) (rectangular nodes such as has-taste in Figure 5 page 35) which are also linked with other semantic units (6) through linking units (1 to 4c) (triangular nodes in Figure 5 page 35);

the said semantic Janus units (5) (rectangular nodes such as has taste) are capable of carrying out operations on themselves, on semantic units (6) to which they are linked (rectangular nodes such as Ham, Pea) and/or on those to which these are in turn directly or indirectly linked and/or on the linking units (1 to 4c) of the said mentioned semantic units (6), and the said semantic Janus units (5) possess time-variable states, characterized in that:

said time-variable states determined what operations are to be carried out on what semantic units (6) and/or linking units (1a to 4c) (page 34, rightmost column, lines 28-35), and

values of informational contents of said semantic units (6) and/or linking units (1 to 4c) changed as a result of the operations of said semantic Janus units (5) are set (rectangular nodes such as has-taste – depend on which taste i.e. salty or sweet then different wine will be ordered), new informational contents or new types of informational contents and/or new semantic units and/or linking units (1a to 4c) and/or partial networks are introduced and/or semantic units (6) and/or linking units (1a to 4c) and/or partial networks within said semantic network are changed or deleted (page 34, middle column, last paragraph).

Claim 2

A semantic network in accordance with claim 1, characterized in that the time-variable states of the semantic Janus units (5) express a respective situation existing in said semantic network, in dependence on which operating within said semantic network is carried out, wherein focusing on selected parts of said semantic network takes place (page 34, rightmost column, lines 28-35).

Claim 3

A semantic network in accordance with claim 1, characterized in that said semantic Janus units (5) have both a vicinity to be monitored, which is monitored by said semantic Janus units (5), and a vicinity to be shaped on which said semantic Janus units (5) perform operations, and a respective new time-variable state of said semantic Janus units (5) is determined from the existing time-variable state of said semantic Janus units (5) and/or from an analysis of an optionally variable vicinity to be monitored (note the lines indicating the linkage of Janus unit in Figure 5 page 35 – a vicinity to be monitored is considered to be Find taste, and a vicinity to be shaped is considered to be Order wine).

Claim 4

A semantic network in accordance with claim 3, characterized in that said vicinity to be monitored and/or said vicinity to be shaped are formed of a subset of a vicinity of semantic units (6) to which a respective semantic Janus unit (5) is linked, and/or of a subset of a vicinity of the very respective semantic Janus unit (5) (note the lines indicating the linkage of Janus unit in Figure 5 page 35 – a vicinity to be monitored is considered to be Find taste, and a vicinity to be shaped is considered to be Order wine).

Claim 5

A semantic network in accordance with any one of claims 1 through 4, characterized in that said semantic Janus units (5), dependently on the existing time-variable state, only concentrate on superobjects located on a higher scale, subobjects located on a lower scale, and/or adjacent objects located on a same scale of said semantic units (6) to which they are linked, and/or on said semantic Janus units (5) themselves (page 33, middle column, lines 14-21).

Claim 6

A semantic network in accordance with claim 5, characterized in that said linking units (1a to 4c) are also incorporated with said superobjects, subobjects and/or adjacent objects (Figure 5 page 35 – triangular nodes are linked throughout the network at different levels).

CONCLUSION

The following is prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

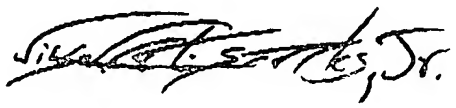
1. Oyanagi et al, U. S. Patent No. 4,815,005.
2. Makhlouf, Mahmoud A., U. S. Patent No. 6,789,054.

CORRESPONDENCE INFORMATION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mai T. Tran whose telephone number is (571) 272-4238. The examiner can normally be reached on M-F 9:00am-- 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on (571) 272-3687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



M.T.T
Patent Examiner
Date: 4/28/2005

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